

IN THE CLAIMS:

Claims 1-16 have been canceled in the prior amendment.

Please cancel claims 33, 34, and 44 without prejudice.

Please amend claim 40 as follows:

Claim 17. (Original) A method of preparing a stable dispersion of carbon nano particles in a liquid, comprising the steps of:

dissolving a dispersant comprising a surfactant having a low hydrophile-lipophile balance (HLB) value of 8 or less in an amount of from 0.001 to 30.0 percent, into a major amount of a liquid medium selected from the group consisting of a mineral oil, a hydrogenated oil, a vegetable oil, a synthetic oil, and combinations thereof forming a dispersant liquid medium;

adding carbon nano material having an aspect ratio of from 500 to 5,000 in an amount of from 0.01 to 10.0 percent by weight into said dispersant liquid medium with mechanical agitation; and forming a uniform suspension of colloidal size solid particles.

Claim 18. (Original) A method of preparing a stable dispersion of carbon nano particles in a liquid, comprising the steps of:

dissolving a dispersant in an amount of from 0.001 to 30.0 percent comprising a surfactant having a low hydrophile-lipophile balance (HLB) value of 8 or less into a major amount of a liquid medium selected from the group consisting of a mineral oil, a hydrogenated oil, a vegetable oil, a synthetic oil, and combinations thereof forming a dispersant liquid medium;

adding carbon nano material having an aspect ratio of from 500 to 5000 in an amount of from 0.01 to 10.0 percent by weight into said dispersant liquid medium with ultrasonification; and forming a uniform suspension of colloidal size solid particles.

Claim 19. (Original) The method according to claim 17, wherein said dispersant comprises an ashless polymeric dispersant.

Claim 20. (Original) The method according to claim 19, wherein said ashless polymeric dispersant comprises a lipophilic hydrocarbon group and a polar hydrophilic functional group.

Claim 21. (Original) The method according to claim 20, wherein said polar hydrophilic functional group is selected from the group consisting of a carboxylate, ester, amine, amide, imine, imide, hydroxyl, ether, epoxide, phosphorus, ester carboxyl, anhydride, nitrile, and combinations thereof.

Claim 22. (Original) The method according to claim 20, wherein said lipophilic hydrocarbon group comprises from 70 to 200 carbon atoms to ensure oil solubility.

Claim 23. (Original) The method according to claim 17, including the step of adding electrolytes to aid in electrostatic stabilization.

Claim 24. (Original) The method according to claim 17, wherein said mechanical agitation is comprises the step of mixing said carbon nano particles using a high shear mixer selected from the group consisting of a high speed mixer, homogenizer, microfluidizer, a Kady mill, a colloid mill, a high impact mixer, a attritor, a ball and pebble mill, and combinations thereof.

Claim 25. (Original) The method according to claim 17, including the step of adding a viscosity improver.

Claim 26. (Original) The method according to claim 25, wherein said viscosity improver is selected from the group consisting of an olefin copolymer, a polymethacrylate, a hydrogenated styrene-diene, a styrene-polyester polymer, and combinations thereof.

Claim 27. (Original) The method according to claim 25, including a thickening agent selected from the group consisting of a polyacrylic acid and sodium polyacrylate, a high-molecular-weight polymer of ethylene oxide, a carboxymethylcellulose, a polyvinyl alcohol, a polyvinyl pyrrolidone, and combinations thereof.

Claim 28. (Original) The method according to claim 17, including the step of adding a plasticizer.

Claim 29. (Original) The method according to claim 28, wherein said plasticizer is selected from the group consisting of a phthalate, an adipate, a sebacate ester, a glyceryl tri(acetoxystearate), an epoxidized soybean oil, an epoxidized linseed oil, a N, n-butyl benzene sulfonamide, an aliphatic polyurethane, a polyester glutarate, a triethylene glycol, a caprate/caprylate, a long chain alkyl ether, a dialkyl diester glutarate, a monomeric polymer, a polyester based on adipic acid, a hydrogenated dimer acid, a distilled dimer acid, a polymerized fatty acid trimer, an ethyl ester of hydrolyzed collagen, an isostearic acid, a sorbian oleate, a cocoyl hydrolyzed keratin, a lanolin oil, a dialkyl adipate, an alkylaryl phosphate, an alkyl diaryl phosphate, a modified triaryl phosphate, triaryl phosphate, a butyl benzyl phthalate, an octyl benzyl phthalate, an alkyl benzyl phthalate, a dibutoxy ethoxy ethyl adipate, a 2-ethylhexyldiphenyl phosphate, a dibutoxy ethoxy ethyl formyl, a diisopropyl adipate, a diisopropyl sebacate, an isodecyl oleate, a neopentyl glycol dicaprate, a neopentyl glycol diotanoate, an isohexyl neopentanoate, an ethoxylated lanolin, a polyoxyethylene cholesterol, a propoxylated (2 moles) lanolin alcohol, a propoxylated lanoline alcohol, an acetylated polyoxyethylene derivative of lanoline, a dimethylpolysiloxane, a glycerine, a polyethylene glycol, a dibutyl phthalate, a 2,2,4-trimethyl-1,3-pentanediol monoisobutyrate, a diisononyl phthalate, and combinations thereof.

Claim 30. (Original) The method according to claim 17, wherein said dispersant is selected from the group comprising a zinc dithiophosphate, a zinc alkyl dithiophosphate, and combinations thereof.

Claim 31. (Original) The method according to claim 17, wherein said dispersant comprises a surfactant added to said liquid medium promoting uniform suspension of extremely fine solid particles of colloidal size.

Claim 32. (Original) The method according to claim 17, wherein said dispersant comprises a long chain oil soluble or dispersible compound which functions to disperse the "cold sludge" formed in engines.

Claim 33. (Canceled)

Claim 34. (Canceled)

Claim 35. (Original) The method according to claim 17, wherein said mineral oil comprises a solvent refined neutral oil, a white mineral oil, a paraffinic oil, a MVI naphthenic oil, and combinations thereof.

Claim 36. (Original) The method according to claim 17, wherein said mineral oil further comprises a hydrocracked mineral oil.

Claim 37. (Original) The method according to claim 17, wherein said hydrogenated oil comprises a severely hydrocracked mineral oil.

Claim 38. (Original) The method according to claim 17, wherein said synthetic oil is selected from the group consisting of a polyalphaolefin, an ester, a naphthene, a polyalkylglycol, a hydrocarbon oil, a halo-substituted hydrocarbon oil such as polymerized and interpolymerized olefins, a polybutylene, a polypropylene, a propylene-isobutylene copolymer, a chlorinated polybutylene, a poly(1-octenes), a poly(1-decenes), an alkylbenzene, a dodecylbenzene, a tetradecylbenzene, a dinonylbenzene, a di-(2-ethylhexyl) benzene, a polyphenyl, a biphenyl, a terphenyl, an alkylated polyphenyl, an alkylated diphenyl ether, an alkylated diphenyl sulfide, an alkylene oxide polymer and

interpolymer and derivatives thereof where the terminal hydroxyl groups have been modified by esterification, an ester of a dicarboxylic acids, a phthalic acid, a succinic acid, an alkyl succinic acid and an alkenyl succinic acid, a maleic acid, an azelaic acid, a suberic acid, a sebacic acid, a fumaric acid, an adipic acid, an alkenyl malonic acid, a butyl alcohol, a hexyl alcohol, a dodecyl alcohol, a 2-ethylhexyl alcohol, an ethylene glycol diethylene glycol monoether, a propylene glycol, a dibutyl adipate, a di(2-ethylhexyl) sebacate, a di-hexyl fumarate, a dioctyl sebacate, a diisooctyl azelate, a diisodecyl azelate, a dioctyl phthalate, a didecyl phthalate, a dicicosyl sebacate, a 2-ethylhexyl diester of linoleic acid dimer, a polyol ether, a neopentyl glycol, trimethylolpropane, a pentaerythritol, a dipentaerythritol, a tripentaerythritol, a polyolester, a diester, a di-aliphatic diester of alkyl carboxylic acids such as di-2-ethylhexylazelate, di-isodecyladipate, and di-tridecyladipate, an aliphatic diester of a dicarboxylic acid, a dialkyl aliphatic diester of an alkyl dicarboxylic acid, such as di-2-ethyl hexyl azelate, di-isodecyl azelate, di-tridecyl azelate, di-isodecyl adipate, di-tridecyl adipate,

Claim 39. (Original) The method according to claim 17, wherein said synthetic oil is selected from the group having varying viscosity from about 2 to about 460 centistokes.

Claim 40. (Currently amended) The method according to claim 17, wherein said carbon nanoparticles are selected from the group consisting of an amorphous carbon particles nanotubes, carbon fibers, ~~spherical particles~~, short nanotubes, and combinations thereof.

Claim 41. (Original) The method according to claim 17, wherein said carbon nanoparticles are surface treated chemically to achieve certain level of hydrophilicity by an activated carbon treatment.

Claim 42. (Original) The method according to claim 17, further comprising the step of varying the amount of said carbon nanoparticles, said dispersant, and said liquid medium and maintaining an HBL value of 8 or less producing compounds having a gel, grease, or wax type consistency.

Claim 43. (Original) The method according to claim 17, wherein said dispersant is selected

from the group consisting of a nonionic surfactant, an ionic surfactant, and mixtures thereof.

Claim 44. (Canceled)